

REMARKS

This responds to the Office Action mailed on August 16, 2006.

Claims 42, 60, 62, 64, 66, 68, 70, 72 and 92 are amended, no claims are canceled, and no claims are added; as a result, claims 42, 58-103 are now pending in this application.

In the Specification

The specification has been amended to update the priority information. No new matter has been added to the specification.

§103 Rejection of the Claims

Claims 42, 60, 62, 64, 66, 68, 70, 72, 74-76, 78, 82-84, 86-87, 90, 93-95, 98-99 and 102-103 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No.6,320,428 to Atsumi *et al.* (hereinafter "the Atsumi reference"). Applicants disagree with the stated grounds of rejection and desire to further clarify various distinctions of the present invention over the cited art. Reconsideration of the present application is therefore requested in light of the present amendment and following remarks.

In the discussion that follows, the disclosed embodiments of the invention may be discussed in comparison to the prior art. It is understood, however, that any discussion of the disclosed embodiments, as well as any discussion of the differences between the disclosed embodiments of the present invention and the prior art do not define the scope or interpretation of any of the claims. Instead, such discussed differences, when presented, are offered merely to help the Examiner appreciate important claim distinctions if they are discussed.

The Examiner has cited the Atsumi reference as pertinent to the patentability of claims in the present application. Atsumi discloses a semiconductor integrated circuit device having a data storage section operable to store mode setting data. The device includes a redundancy storage section having a nonvolatile transistor for storing the mode setting data, a latch circuit for latching data read from the nonvolatile transistor and generating a mode signal, a transmission gate for transmitting the data from the nonvolatile transistor to the latch circuit.

Although the Examiner alleges that the nonvolatile fuse structure may include a flash memory cell as an obvious design choice, the reference fails to disclose that the flash memory

cell has a threshold voltage greater than about 2.5 volts, and less than about 3.5 volts. The Examiner is directed, *inter-alia*, to page 10, lines 5-6 for this disclosure. The Atsumi reference further fails to disclose, or fairly suggest using a voltage supply that provides a voltage (Vcc) that is as low as approximately 1.65 volts, and as high as approximately 2.2 volts. The Examiner is directed to, *inter-alia*, page 2, lines 12-15, and page 4, lines 12-15, for this disclosure.

Turning now to the claims, differences between the applied reference and the claim language will be specifically pointed out. Claim 42, as amended, recites in pertinent part: “A wireless device, comprising... a nonvolatile fuse that includes a flash cell having a gate, a drain, and a source, wherein the gate receives the gating signal, wherein the drain couples to the transfer stage, wherein the source couples to ground, *and wherein the nonvolatile fuse is configured to operate with a voltage supply greater than approximately 1.65 volts.*” (Emphasis added). The Atsumi reference does not disclose or suggest this. Claim 42 is therefore now in allowable form. Claim 78, which depends from claim 42 is also allowable, based upon the allowable form of the base claim and further in view of the additional limitations recited in the dependent claim.

Claim 60, as amended, recites in pertinent part, “A wireless device, comprising... a nonvolatile fuse to hold data, the nonvolatile fuse having a first connection coupled to receive the gating signal, a second connection, and a third connection, the gating signal to be boosted to enable the nonvolatile fuse to selectively transfer the data to the latch, *the non-volatile fuse being configured to operate with a voltage supply greater than approximately 1.65 volts.*” (Emphasis added). Again, the Atsumi reference does not disclose or fairly suggest this. Claim 60 is therefore now in allowable form. Claims 82, 83 and 84, which depend from claim 60 are also allowable, based upon the allowable form of the base claim and further in view of the additional limitations recited in the dependent claims.

Claim 62, as amended, recites in pertinent part: “A wireless device, comprising... a nonvolatile fuse to hold data, the nonvolatile fuse having a first connection coupled to the input stage to receive the gating signal, a second connection, and a third connection, the gating signal to be boosted to enable the nonvolatile fuse to selectively transfer the data to the latch, *wherein the non-volatile fuse is configured to operate with a voltage supply greater than approximately 1.65 volts.*” (Emphasis added). Yet again, the Atsumi reference simply does not disclose or fairly suggest this. Claim 62 is therefore now also in allowable form. Claims 85, 86, 87 and 88,

which depend from claim 62 are also allowable, based upon the allowable form of the base claim and further in view of the additional limitations recited in the dependent claims.

Claim 64, as amended, recites in pertinent part, “A wireless device, comprising... a nonvolatile fuse to hold the data, the nonvolatile fuse having a first connection coupled to the input stage and the boosting stage to receive the gating signal, a second connection, and a third connection, the gating signal to be boosted to enable the nonvolatile fuse to transfer the data to the transferring stage, *wherein the non-volatile fuse is configured to operate with a voltage supply greater than approximately 1.65 volts.*” (Emphasis added). Atsumi does not disclose or fairly suggest this. Accordingly, claim 64 is therefore now also in allowable form. Claims 85, 89, 90 and 91, which depend from claim 64 are also allowable, based upon the allowable form of the base claim and further in view of the additional limitations recited in the dependent claims.

Claim 66, as amended, recites in pertinent part: “A wireless device, comprising... a flash cell to hold the data, the flash cell comprising a gate coupled to the input stage to receive the gating signal, a drain coupled to the transferring stage, and a source coupled to ground, *the flash cell having a threshold voltage between approximately 2.5 volts and approximately 3.5 volts.*” (Emphasis added). Atsumi does not disclose or, in any motivated fashion, suggest this. Claim 66 is therefore now also in allowable form. Claims 92, 93, 94 and 95, which depend from claim 66 are also allowable, based upon the allowable form of the base claim and further in view of the additional limitations recited in the dependent claims.

Claim 68, as amended, “A wireless device, comprising... a nonvolatile fuse to hold the data *that is configured to operate with a voltage supply that is greater than approximately 1.65 volts...*” (Emphasis added). Atsumi does not disclose or, in any motivated fashion, suggest this. Claim 68 is therefore now also in allowable form. Claims 96, 97, 98 and 99, which depend from claim 68 are also allowable, based upon the allowable form of the base claim and further in view of the additional limitations recited in the dependent claims.

Claim 70, as amended, recites in pertinent part: “A wireless device, comprising... flash cell to hold the data *having a threshold voltage of at least approximately 2.5 volts...*” (Emphasis added). Atsumi does not disclose or fairly suggest this. Accordingly, claim 70 is therefore now also in allowable form. Claims 100, 101, 102 and 103, which depend from claim 70 are also

allowable, based upon the allowable form of the base claim and further in view of the additional limitations recited in the dependent claims.

Finally, claim 72, as amended, recites in pertinent part, “a wireless device, comprising... a nonvolatile fuse to hold the data, the nonvolatile fuse configured to receive a selectively boosted gating signal *and configured to operate with a voltage supply greater than approximately 1.65 volts.*”. (Emphasis added). Again, Atsumi does not disclose or suggest this in any motivated fashion. Accordingly, claim 72 is therefore now also in allowable form. Claims 73, 74, 75, 76 and 77, which depend from claim 72 are also allowable, based upon the allowable form of the base claim and further in view of the additional limitations recited in the dependent claims.

Claim 92 is also amended to provide a proper antecedent basis.

Allowable Subject Matter

Claims 73, 77, 85, 88-89, 91-92, 96-97 and 100-101 were objected to as being dependent upon a rejected claims, however, they contain allowable subject matter over prior arts of record.

Claims 58-59, 61, 63, 65, 67, 69, 71 and 79-81 were allowed.

The Examiner is thanked for his indication of allowable subject matter, and for his careful examination of the present application.

Serial Number: 10/716,766

Filing Date: November 19, 2003

Title: ENHANCED FUSE CONFIGURATIONS FOR LOW-VOLTAGE FLASH MEMORIES

CONCLUSION

Applicant respectfully submits that all claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at 612-373-6900 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 19 day of October 2006.

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